

AUG 10 2007

## REMARKS AND ARGUMENTS

Claims 1, 3 and 7-12 are pending in the present application, of which claims 1, 9 and 10 are independent. No changes to the claims have been made in the present Response.

Claims 1, 3 and 7-12 were rejected under 35 U.S.C. § 103(a) as unpatentable over Antoni-Zimmerman et al. Applicants respectfully traverse this rejection.

Applicants have argued in their response to the first Office Action that a finding of obviousness may be rebutted by demonstrating unexpected results relative to the prior art disclosure (*See* M.P.E.P. § 2144.05(III)), and that Applicants have demonstrated (see pages 10-21) that the claimed biocide combinations display synergistic activity (synergy index  $< 1$ ) within the claimed ranges of biocide ratios. The final Office Action appears to rely on *Ex parte Quadranti* to argue that synergy is not unexpected. However, there are important differences between the factual situation in that case and in the present application.

In *Quadranti*, the Board objected to the Colby equation used to demonstrate synergy, stating that it was not considered valid by workers in the field. *Quadranti*, 1992 Pat. App. LEXIS 26, \*2-\*3. Here, Applicants are relying on the Synergy Index (SI) described by Kull, F.C.; Eisman, P.C.; Sylwestrowicz, H.D. and Mayer, R.L., in *Applied Microbiology* 9:538-541 (1961), an accepted method for determining synergy, as stated on page 9 of the present application.

The Board also objected to the fact that the data presented did not show very good effectiveness. *Id.* at \*5. In the present application, the SI values are calculated from minimum inhibitory concentration (MIC) of each component, which "is the concentration tested under a specific set of conditions that prevents the growth of added microorganisms" (see page 9, lines 19-20). Therefore, each SI represents a combination of biocides that actually prevents growth of microorganisms.

The Office Action objects to the fact that the claims are not limited to the organisms for which synergy is demonstrated. However, Applicants are claiming a composition, and any demonstration of unexpected benefit for that composition is sufficient to overcome a *prima facie* case of obviousness. It is not necessary to demonstrate synergy of the composition with respect to every possible organism. *See* M.P.E.P. § 716.02(a)(II) (citing *In re Chupp & Ex parte A*). This would be impossible in practice and would make synergistic compositions unpatentable. Alternatively, it would require Applicants to rewrite their composition claims as method claims directed to a particular organism. This is not required under the law, which allows claims to *prima facie* obvious compositions for which Applicants have demonstrated unexpected results.

Applicants believe that the foregoing arguments have overcome the rejection. However, if the Examiner has any further objections to the application, Applicants respectfully request that the Examiner contact Applicants' undersigned attorney by telephone at (847) 649-3891 to discuss the remaining issues.

Respectfully submitted,



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